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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,661	05/17/2006	Michael Prosser	26786-520-NATL	9367

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EXAMINER	
YANG, ANDREW	

ART UNIT	PAPER NUMBER
3733	

MAIL DATE	DELIVERY MODE
05/19/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,661	PROSSER, MICHAEL	
	Examiner	Art Unit	
	ANDREW YANG	3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-16 and 18-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-16 and 18-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to Applicant's Request for Continued Examination filed on February 25, 2008.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

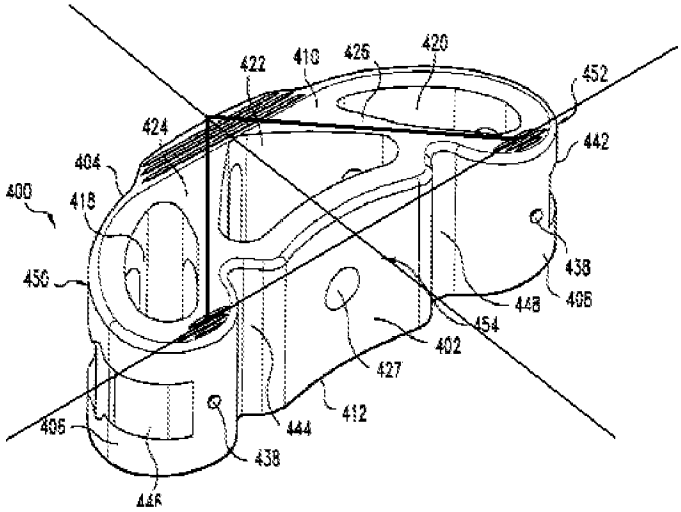
Claims 1-3, 7, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Boriani et al. (U.S. Patent No. 6159211).

Boriani et al. discloses a spinal cage 10 with a rigid body 12 made of an inert material (Column 3, Line 34) and formed in an annular configuration (Figure 1). The body 12 has opposed upper 14 and lower 16 surfaces and an annular side wall 18 extending between the surfaces. A plurality of ridges 24, 25 project outward from the upper 14 and lower 16 surfaces and the annular sidewall 18 has a plurality of spaced apertures 22. Ridges 24 run in an anterior/posterior direction and ridges 25 run in a medial/lateral direction making them angularly offset. Furthermore, where the ridges

intersect at the corners of the implant (Figure 5) can be considered a plurality of indexing members on the perimeter surface. Also as seen in figure 5, a plurality of implants are stacked, and thus any implant between the most upper and most lower implant can be considered a spacing element. A transverse 28 bisects the central opening 20, thus forming a pair of axially aligned openings, which can be packed with bone graft material (Column 4, Lines 11-13).

Claims 3, 5, 6, 8-10, 12-16, 18, 19, 21, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by White et al. (U.S. Publication No. 2004/0073314).

White et al. discloses a spinal cage assembly 400 made of a biologically inert material (Paragraph 53) in the shape of a rigid annular cage (Figure 15). With further reference to Figure 15, the cage has upper and lower surfaces extending about the perimeter of the cage and an annular sidewall extending therebetween. Traverse inner wall 424, 426 extends across the cage. Grooves 414, 415, 416 are formed on the perimeter surfaces that form raised projecting ridges and a plurality of openings 428, 430, 431 are formed on the annular sidewall. Further more, the raised ridges are angularly offset. The ridges on the anterior side (defined by wall 404) are disposed on a median axis extending through the implant. The ridges on the posterior side (along wall 402) are offset from the median axis at an angle from the ridges at the anterior side of the implant (See Figure Below).



A pair of axially aligned openings 418, 420 extend through the cage 400 that can be packed with bone growth material (Paragraph 92). The perimeter surfaces defining openings 418, 420 and is considered that the perimeter surfaces them self define indexing members since they cooperate with pins 316-319 on the spacing element 310 such that the pins 316-319 come in contact with a perimeter surface of cage 400. Spacing element 310 axially aligning and securing cage assembly 400 to an identical second cage assembly 401 (Figure 13). The spacing element has an annular configuration (Figure 13) and a transverse portion with resilient attachment members 320, 321 on opposite ends of the spacer that resist axial movement when secured to the cage assemblies (Paragraph 89). Furthermore, it is considered that the cage assemblies and spacing element form a substantially half-moon shape or kidney shape (Figures 13-21).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (U.S. Publication No. 2004/0073314).

White et al. discloses the claimed invention except for a pair of resilient members on opposite sides of the spacer element. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of White et al with a pair of resilient members on opposite sides of the spacer element, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boriani et al (U.S. Patent Number 6159211) in view of Brantigan (U.S. Patent No. 5192327).

Boriani et al. discloses the invention as claimed except for the cage assembly having an oval configuration. Brantigan teaches a spinal cage assembly with an oval shape to conform with the general outline perimeter of the vertebrae (Column 2, Lines 1-4). It would have been obvious to one skilled in the art at the time the invention was made to construct the device of Boriani et al. with an oval shape in view of Brantigan so

that the device would have a shape that conforms to the general outline perimeter of the vertebrae.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (U.S. Publication No. 2004/0073314) in view of Brantigan (U.S. Patent No. 5192327).

White et al. disclose the invention as claimed except for the cage assembly having an oval configuration. Brantigan teaches a spinal cage assembly with an oval shape to conform with the general outline perimeter of the vertebrae (Column 2, Lines 1-4). It would have been obvious to one skilled in the art at the time the invention was made to construct the device of White et al. with an oval shape in view of Brantigan so that the device would have a shape that conforms to the general outline perimeter of the vertebrae.

Claims 1, 3, 16, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry et al. (U.S. Patent No. 7309358) in view of Brantigan (U.S. Patent No. 5192327).

Berry et al. discloses a cage assembly 510 having a rigid cage 530 formed of a biologically inert material (Column 4, Lines 35-40). The cage 530 has an upper surface 533 and lower surface 535 and a annular side wall 532 extends between the surfaces. A plurality of raised ridges 531, 539 extends from the upper and lower surfaces 533, 535. The ridges 531 and ridges 539 are angularly offset from each other (the upper ridges point one way and the lower ridges point the other (Figures 24-26), the perimeter surface defines a plurality of indexing members in the form of holes in which members 560 and 550 extend. The cage assembly 510 includes a spacing element 512 which

has a pair of similar holes that cooperate with the holes of the cage 530 for axially aligning the spacing element and the cage (Column 15, Lines 43-51). A plurality of spaced apertures 537 are in the side wall. The spacing element has an axial dimension which is less than an axial dimension of the annular side wall of the cage 530 (Figure 25).

Berry et al. fails to disclose the device having a pair of axially extending openings through the cage. Brantigan teaches an spinal cage 31 having an annular wall and a transverse wall 32 extending there across and forming two axially extending apertures (Figure 6). The apertures are for receiving bone graft material (Column 5, Lines 36-44). It would have been obvious to one skilled in the art to construct the device of Berry et al. with a transverse wall extending across the implant to form a pair of axially extending apertures in view of Brantigan in order to form apertures for receiving bone graft material while also increasing the strength of the implant.

Response to Arguments

Response to Applicant's arguments regarding Boriani have been addressed in the body of the Office Action. The Examiner's interpretation of amended claims has been provided in the Office Action.

In response to Applicant's argument that White fails to disclose a spacing element, the Examiner respectfully disagrees. Element 310 spaces apart an upper and lower cage and is thus considered a spacing element.

Response to Applicant's arguments regarding White and the indexing members have been addressed in the Body of the Office action.

In response to Applicant's argument that members 320, 321 of White are not locking members, the Examiner respectfully disagrees. As stated in paragraph 90, engaging portion 353 of locking member 320 is received in a receptacle in the cage member 400 there by locking the spacer 310 and cage 400 together. Furthermore, there is are locking members 320, 321 on opposite sides of the spacer, to duplicate the locking members on each side would only take ordinary skill in the art.

In response to Applicant's argument that Boriani in view of Brantigan would not have been obvious, the Examiner respectfully disagrees. The arguments with regard to Boriani have been discussed, and it was further noted that Boriani lacked the oval shape. Brantigan explicitly states why an oval shape would be advantageous. Boriani and Brantigan providing stackable spinal implants, and thus would have been obvious to combine to two references.

In response to Applicant's argument that White in view of Brantigan would not have been obvious, the Examiner respectfully disagrees. The member 310 of White is considered a spacer as previously discussed. Brantigan explicitly states why it would be obvious to have an oval shaped implant. Since the entire device of White is implanted into the spine, constructing the entire device of White in an oval shape would have been obvious. Furthermore, the shape in which an object is constructed would be obvious to one skilled in the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Publication No. 2005/0060034.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW YANG whose telephone number is (571)272-3472. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 3733
5/13/2008
/Eduardo C. Robert/
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